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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,137	09/10/2003	Stephen Cook	FGT 1830 PA	2136

28549 7590 06/17/2005

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EXAMINER

ROSENBERG, LAURA B

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/605,137	Applicant(s) COOK, STEPHEN	
	Examiner Laura B. Rosenberg	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9, 11-16, 18 and 20 is/are rejected.
- 7) ☒ Claim(s) 5, 10, 17 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/10/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Information Disclosure Statement

1. The first reference listed on the information disclosure statement filed 10 September 2003 was cited incorrectly. The examiner crossed through this reference and cited it correctly on the PTO-892.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 12, 13, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Schondorf et al. (6,640,174).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

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Schondorf et al. disclose a method of installing a fuel cut-off control system in a vehicle comprising:

- Installing a crash sensor (including #16, 18, 20, 22, 72) in the vehicle comprising installing an airbag crash sensor (column 4) that is electronically coupled to a supplemental restraint system (including #14)
- Electronically coupling the crash sensor to a controller (including #12)
- Electronically coupling the controller to a fuel supply system (including #26, 28) comprising electronically coupling the controller to a fuel pump (including #39)
- Electronically coupling the controller to an indicator mechanism (including #48)
- Electronically coupling the controller to a rest mechanism (column 4, line 64-column 5, line 2; column 5, lines 64-67)

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 6-8, 11, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schondorf et al. (6,640,174) in view of DeLine et al. (6,222,460).

Schondorf et al. disclose a fuel cut-off control system for a vehicle comprising:

- Crash sensor (including #16, 18, 20, 22, 72) for detecting a fuel cut-off event and generating a crash signal (signals are input to the controller; column 4)

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- Fuel supply system (including #26, 28) coupled to an engine (not shown) and able to deliver fuel to the engine
- Controller (including #12) coupled to the crash sensor and fuel supply system and able to receive the crash signal from the crash sensor, disable the fuel supply system (column 4), and generate a cut-off notification signal (at #54; column 4)
- Indicator mechanism (including #48), which is a message display center (including indicator light), being coupled to the controller and able to display crash-related information to an occupant of the vehicle (including restraint control module activity; column 5, lines 4-8)
- Reset mechanism coupled to the controller, operated by the occupant (by turning the ignition key), and able to transmit a delivery-continuation signal to the controller to resume fuel supply to the engine (column 4, line 64-column 5, line 2; column 5, lines 64-67)
- Crash sensor being an integral part of a supplement restraint system (including #14) having an airbag (column 4)
- Fuel supply system including fuel pump (including #39) coupled to the controller

In regards to claims 1 and 7, Schondorf et al. do not specifically disclose the indicator mechanism receiving the cut-off notification signal and displaying a cut-off notification message to the occupant. However, the manner in which Schondorf et al.'s control system is connected ties the restraint system to the fuel cut-off control system in such a way that and an indicator light/message that the restraint module has been activated would also be an indication that the fuel cut-off system has been activated.

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Nonetheless, DeLine et al. teach an indicator mechanism (including #22, 24) for receiving signals from various vehicle systems and displaying various vehicle information, such as supplemental restraint system status, engine coolant temperature, oil pressure, fuel status, battery condition/voltage, cellular phone operation, and so on. It would have been obvious to one skilled in the art at the time that the invention was made to modify the indicator mechanism of Schondorf et al. such that it comprised receiving the cut-off notification signal and displaying a cut-off notification message to the occupant as claimed in view of the teachings of DeLine et al. so as to provide essential information and warnings for easy viewing by a vehicle occupant (DeLine et al.: Summary of Invention; column 11, lines 4-22).

In regards to claims 4 and 7, Schondorf et al. do not specifically disclose the location within the vehicle of the indicator mechanism. However, it would have been an obvious matter of design choice to locate the indicator mechanism with an odometer display mechanism or digital clock display integrated within a dashboard of the vehicle since it is old and well known in the art that a vehicle emergency or status indicator, such as airbag functioning, battery levels, engine malfunction, engine temperature, and so on, should be located within easy view of the vehicle occupant.

In regards to claim 20, Schondorf et al. do not specifically disclose electronically coupling the controller to a low-fuel indicator. DeLine et al. teach an indicator mechanism (including #22, 24) for receiving signals from various vehicle systems and displaying various vehicle information, such as fuel status (column 8, lines 63-67; column 11, lines 4-22). It would have been obvious to one skilled in the art at the time

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that the invention was made to modify the step of electronically coupling the controller to the indicator mechanism of Schondorf et al. such that it comprised electronically coupling the controller to a low-fuel indicator as claimed in view of the teachings of DeLine et al. so that the vehicle occupant can easily and quickly determine the level of fuel in the vehicle without having to stop the vehicle and check the fuel tank. Further, it is old and well known in the art to portray a fuel level indicator on an easily viewable location within the vehicle.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schondorf et al. (6,640,174) in view of DeLine et al. (6,222,460), further in view of MacDonald et al. (6,170,332). Schondorf et al. disclose electronically coupling the controller to an electronic circuitry having an accelerometer (including #16, 18, 20, 22) integrated therein. However, Schondorf et al. do not specifically disclose the accelerometer being a micromechanical accelerometer. MacDonald teaches electronic circuitry having a micromechanical accelerometer integrated therein, specifically for automotive applications such as airbag deployment (Abstract). It would have been obvious to one skilled in the art at the time that the invention was made to modify the accelerometer of Schondorf et al. such that it comprised a micromechanical accelerometer as claimed in view of the teachings of MacDonald et al. so as to provide an accelerometer having high sensitivity, extreme accuracy, and resistance to out of plane forces (MacDonald et al.: Abstract).

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schondorf et al. (6,640,174) in view of MacDonald et al. (6,170,332). Schondorf et al. disclose electronically coupling the controller to an electronic circuitry having an accelerometer (including #16, 18, 20, 22) integrated therein. However, Schondorf et al. do not specifically disclose the accelerometer being a micromechanical accelerometer. MacDonald teaches electronic circuitry having a micromechanical accelerometer integrated therein, specifically for automotive applications such as airbag deployment (Abstract). It would have been obvious to one skilled in the art at the time that the invention was made to modify the accelerometer of Schondorf et al. such that it comprised a micromechanical accelerometer as claimed in view of the teachings of MacDonald et al. so as to provide an accelerometer having high sensitivity, extreme accuracy, and resistance to out of plane forces (MacDonald et al.: Abstract).

8. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schondorf et al. (6,640,174). Schondorf et al. do not specifically disclose the location within the vehicle of the indicator mechanism. However, it would have been an obvious matter of design choice to locate the indicator mechanism with an odometer display mechanism or digital clock display since it is old and well known in the art that a vehicle emergency or status indicator, such as airbag functioning, battery levels, engine malfunction, engine temperature, and so on, should be located within easy view of the vehicle occupant.

Allowable Subject Matter

9. Claims 5, 10, 17, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: The allowable subject matter is the reset mechanism being a clock button or trip odometer button, in combination with other features of the claims. While Schondorf et al. disclose in the Background Art section the use of a manual reset button, they teach away from using this type of reset mechanism, thus it would not be obvious to one skilled in the art to modify their reset mechanism to include this feature.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Doty, Jr. and Iwata each disclose a fuel cut-off system and reset mechanism.

Ellsworth discloses a fuel cut-off switch that closes when a vehicle rolls over and remains closed until the vehicle rights itself.

Furuichi et al., Frank et al., and Frimberger et al. each disclose a fuel cut-off system and an airbag restraint system.

Breed discloses an airbag restraint system and a heads-up display that indicates an obstacle in the vehicle's path and impending collision.

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Burgess discloses an airbag restraint system and a fuel cut-off system that is activated in rollover situations and can be reset.

Treharne et al. disclose a method and apparatus for programming a spare key into a security system.

McConnell discloses an airbag restraint system and a fuel cut-off system with a reset mechanism.

Handrich discloses a micromechanical accelerometer.

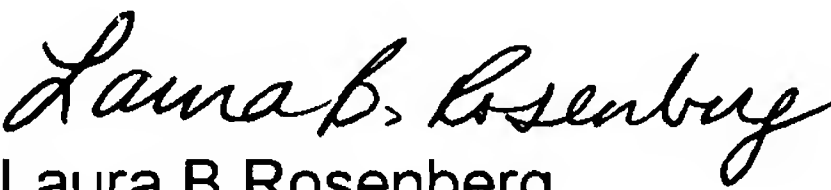
Strumolo et al. disclose an airbag restraint system, a fuel cut-off system, and an indicator mechanism for warning of an impending collision.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura B. Rosenberg whose telephone number is (571) 272-6674. The examiner can normally be reached on Monday-Friday 7:00am-3:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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Patent Examiner
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